

05/05/14 Agenda

Review Homework

- Worksheet 4 - Solve Quadratic Functions with ZPP
- Chapter 9 - Quadratic Functions & Equations
 - Day 5 - Solving Quadratic Functions (special cases)

- Review Tomorrow!!!

- Quiz on Wednesday!!!

Homework

- Worksheet 5 - Quadratics Day 5

Warm Up - Homework out!



Solve the following quadratics using **ZPP**:

$$(x-4)(x+7)=0$$

$$\begin{array}{r} x-4=0 \\ +4 \quad +4 \\ \hline \end{array}$$

$$x=4$$

$$\begin{array}{r} x+7=0 \\ -7 \quad -7 \\ \hline \end{array}$$

$$x=-7$$

$$x^2 - 4x - 12 = 0$$

$$(x-6)(x+2)=0$$

$$\begin{array}{r} x-6=0 \\ +6 \quad +6 \\ \hline \end{array}$$

$$x=6$$

$$\begin{array}{r} x+2=0 \\ -2 \quad -2 \\ \hline \end{array}$$

$$x=-2$$

Solve the following quadratics using **ZPP**:Wait, what's different? We need to REARRANGE IT !!

$$\begin{array}{l}
 x^2 + 7x = -12 \\
 \quad \quad \quad +12 \quad +12 \\
 \hline
 x^2 + 7x + 12 = 0
 \end{array}
 \quad
 \begin{array}{l}
 Ax^2 + Bx + C = 0 \\
 \begin{array}{r}
 12 \quad +7 \\
 \overline{2 \quad 6} \\
 3 \quad 4 = 7
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 (x+3)(x+4) = 0 \\
 \begin{array}{l|l}
 x+3=0 & x+4=0 \\
 \hline
 x-3 & x-4 \\
 \hline
 x=-3 & x=-4
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 2x^2 - 9x = x^2 - 20 \\
 \quad \quad \quad -x^2 \quad \quad -x^2 \\
 \hline
 x^2 - 9x = -20 \\
 \quad \quad \quad +20 \quad \quad +20 \\
 \hline
 x^2 - 9x + 20 = 0 \\
 (x-4)(x-5) = 0 \\
 x=4 \quad x=5
 \end{array}$$

These have a NEGATIVE A value.We need to FACTOR OUT GCF OF -1 !!

$$\begin{array}{l}
 -2x^2 - 5x + 3 = 0 \\
 \quad \quad \quad -1 \quad -1 \quad -1 \\
 \hline
 -1(2x^2 + 5x - 3) = 0 \\
 -1(2x-1)(x+3) = 0 \\
 \begin{array}{l|l}
 2x-1=0 & x+3=0 \\
 \hline
 2x-1 & x-3 \\
 \hline
 2x=\frac{1}{2} & x=-3 \\
 \hline
 x=\frac{1}{2} &
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 \begin{array}{r}
 ac \quad -6 \quad +5 \\
 -1 \quad 6 \end{array} \\
 2x^2 - 1x + 6x - 3 = 0 \\
 \begin{array}{c}
 2x \quad -1 \\
 \times \begin{array}{|c|c|} \hline 2x^2 & -1x \\ \hline +3 & +6x-3 \end{array}
 \end{array}
 \end{array}$$

$$\begin{array}{l}
 -3x^2 + 15x - 12 = 0 \\
 -3(x^2 - 5x + 4) = 0
 \end{array}$$

Unit 9 - Day 5 - Solving Quadratic Functions (special cases)

May 5, 2014

These are missing BX TERM (MIDDLE TERM)

We can use SQUARE ROOTS to solve these!!

$$\sqrt{x^2} = \sqrt{4}$$

$$x = 2 \quad x = -2$$

$$x = \pm 2$$

$$x^2 - 4 = 0$$

$$(x+2)(x-2) = 0$$

$$\frac{4x^2}{4} = \frac{64}{4}$$

$$\sqrt{x^2} = \sqrt{16}$$

$$x = \pm 4$$

$$x^2 - 3 = 0$$

$$\begin{array}{r} x^2 - 3 = 0 \\ +3 \quad +3 \\ \hline \sqrt{x^2} = \sqrt{3} \end{array}$$

$$x = \pm \sqrt{3}$$

$$\frac{3x^2}{3} - \frac{75}{3} = 0$$

$$\begin{array}{r} x^2 - 25 = 0 \\ +25 \quad +25 \\ \hline x^2 = 25 \end{array}$$

$$\frac{4x^2}{4} + \frac{28}{4} = \frac{0}{4}$$

$$\begin{array}{r} x^2 + 7 = 0 \\ -7 \quad -7 \\ \hline \end{array}$$

$$\sqrt{x^2} = \sqrt{-7}$$

CAN'T $\sqrt{\quad}$ A
NEGATIVE NUMBER

NO
SOLUTION